

**lovE-32**

ATGGCTGCAGATCAAGGTATATTCACTAACTCGGTCACTATCTCGCCAGTGGTGGGTTACGCGAC  
 CGGTGGAACATTACCCCGCCGTGCATTCCGACGCTCTTGTGATCGGTGTCATGCACAAAAGATCA  
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAGCGTTGCCAGCAGGCTGGACTT  
 CGATGCGTCTACAGTGAGCGATGCCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT  
 CTCTGCTGACCCAGATCCCTGCTTGACATGTCTCGCCTCCAGTGCCCTCACAGAGTTTGCCGC  
 TAGACGTATCCGAGTCGCATTCTCAAATACCTCCCGGCAATTTCTTGATCCACCGGACAGCTAC  
 GACTGGTCGTGGACCTCGATTTGCACTGACGAGGCTATTGACACTGACTGCTGGGGGCTGTCCCA  
 ATGTGATGGAGGCTTCAGCTGTGAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTTCGAGT  
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCGGCCAGTGCGCAA  
 CGAGAGCTTTTCGATGACCTGTGCGCGGTGTGCGAGGAAGTGAAGAGATCCTTCTGGCCGTGAC  
 GGTAAGTGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTTCAATGCGTCACGAC  
 GGCTTCTTACTGTCTGCGCCAACAAGCGCAGGCCGACTGCCATCAAGGCACACTAGACGAATGT  
 TTACGGACCAAGAACCTCTTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTTGACCGC  
 CATATCGGAGTTGCTCCTGTGCGAAATTAGGCGGACCCAGAACAGCCATATGAGCCCACTGGAAG  
 GGAGTCGATCCAGTCGCCGAGCAGAGACGACACCAGCAGCAGCAGCGGCCACAGCAGTGTGAC  
 ACCATACCTTCTTTAGCGAGAACCTCCCTATTGGTGGGCTGTTCTCTATGTTGACCCCTGAC  
 ACACGCCCTATTCTCGGCTTGCACTACGTTACATGTTGGGCTACAATTGCTGCGTGAGAATGAGA  
 TTACTCTGGGAGTACACTCCGCCCAGGGCATTGCAGCTTCCATCAGCATGAGCGGGGAATCAGGC  
 GAGGATATAGCCAGGACAGGGGCGACCAAGTTCGCAAGATGCGAGGAGCAGCCGACCACTCCAGC  
 GGCTCGGGTTTTGTTTCATGTTCTTGAGTGATGAAGGGGCTTTCCAGGAGGCAAAGTCTGCTGGTT  
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTTTCCCTCGCCCGCAA  
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCCTCCATGA (SEQ ID NO:82)

5

**lovE-33**

ATGGCTGCAGATCAAGGTATATTACGAACTCGGTCACTCTCTCGCCAGTGGAGGGTTACGCGAC  
 CGGTGGAACATTACCCCGCCGTGCATTCCGACGCTCTTGTGATCGGTGTCATGCACGAAAGATCA  
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAGCGTTGCCAGCAGGCTGGACTT  
 CGATGCGTCTACAGTGAGCGATGCCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT  
 CTCTGCTGACCCAGATCCCTGCTTGACATGTCTCGCCTCCAGTGCCCTCACAGAGCTTGCCGC  
 TAGACGTATCCGAGTCGCATTCTCAAATACCTCCCGGCAATTTCTTGATCCACCGGACAGCTAC  
 GACTGGTCGTGGACCTCGATTTGCACTGACGAGGCTATTGACACTGACTGCTGGGGGCTGTCCCA  
 ATGTGATGGAGGCTTCAGCTGTGAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTTCGAGT  
 ATACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCGGCCAGTGCGCAA  
 CGAGAGCTTTTCGATGACCTGTGCGCGGTGTGCGAGGAAGTGAAGAGATCCTTCTGGCCGTGAC  
 GGTAAGTGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTTCAATGCGTCACGAC  
 GGCTTCTTACTGTCTGCGCCAACAAGCGCAGGCCGACTGCCATCAAGGCACACTAGACGAATGT  
 TTACGGACCAAGAACCTCTTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTTGACCGC  
 CATATCGGAGTTGCTCCTGTGCGAAATTAGGCGGACCCAGAACAGCCATATGAGCCCACTGGAAG  
 GGAGTCGATCCAGTCGCCGAGCAGAGACGACACCAGCAGCAGCAGCGGCCACAGCAGTGTGAC  
 ACCATACCTTCTTTAGCGAGAACCTCCCTATTGGTGAGCTGTTCTCTATGTTGACCCCTGAC  
 ACACGCCCTATTCTCGGCTTGCACTACGTTACATGTTGGGGTACAATTGCTGCGTGAGAATGAGA  
 TTACTCTGGGAGTACACTCCGCCCAGGGCATTGCAGCTTCCATCAGCATGAGCGGGGAACCAGGC  
 GAGGATATAGCCAGGACAGGGGCGACCAATTCCACAAGATGCGAGGAGCAGCCGACCACTCCAGC  
 GGCTCGGGTTTTGTTTCATGTTCTTGAGTGATGAAGGGGCTTTCCAGGAGGCAAAGTCTGCTGGTT  
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTTTCCCTCGCCCGCAA  
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCCTCCATGA (SEQ ID NO:83)

**lovE-34**

ATGGCTGCAGATCAAGGTATATTACGAACTCGGTCACTCTCTCGCCAGTGGAGGGTTACGCAC  
 CGGTGGAACATTACCCCGCCGTGCATTGCGACGCTCTTGTGATCGGTGTCATGCACAAAAGATCA  
 AATGTACTGGAAATAAGGAGGTTATTGGCCGTGCTCCCTGTCAGCGTTGCCAGCAGGCTGGACTT  
 CGATGCGTATACAGTGAGCGATGCCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT  
 CTCTGCTGACCCAGATCCCTGCTTGACATGTCTCGCCTCAAGTGCCCTCACAGAGCTTGTGCG  
 TAGACATATCCGAGTCGCATTCTCAAATACCTCCCGGCAATTTCTTGATCCACCGGACAGCTAC  
 GACTGGTCGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGGCTGTCCCA  
 ATGTGATGGAGGCTTCAGCTGTGAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTTCGAGT  
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCGGCCAGTGCGCAA  
 CGAGAGCTTTTCGATGACCTGTGCGCGGTGTGCGAGGAACTGGAAGAGATCCTTCTGGCCGTGAC  
 GGTAGAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTTCAATGCGTCAACGAC  
 GGCTTCTTACTGTCTGCGCCAACAAGCGCAGGCCGACTGCCATCAAGGCACACTAGACGAATGT  
 TTACGGACCAAGAACCTCTTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTTGACCGC  
 CATATCGGAGTTGCTCCTGTGCGAAATTAGGCGGACCCAGAACAGCCATATGAGCCCACTGGAAG  
 GGAGTCGATCCAGTCGCCGAGCAGAGACGACACCAGCAGCAGCAGCGGCCACAGCAGTGTGAC  
 ACCATACCCTTCTTTAGCGAGAACCTCCCTATTGGTGAGCTGTTCTCTATGTTGACCCCTGAC  
 ACACGCCCTATTCTCGGCTTGCACTACGTTACATGTTGGGGTACAATTGCTGCGTGAGAATGAGA  
 TTACTCTGGGAGTACACTCCGCCCAGGGCATTGCAGCTTCCATCAGCATGAGCGGGGAACCAGGC  
 GAGGATATAGCCAGGACAGGGGCGACCAATTCGCAAGATGCGAGGAGCAGCCGACCACTCCAGC  
 GGCTCGGGTTTTGTTTATGTTCTTGAGTGATGAAGGGGCATTCCAGGAGGCAAAGTCTGCTGGTT  
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTTTCCCTCGCCCGCAA  
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCCTCCATGA (SEQ ID NO:84)

**lovE-36**

ATGGCTGCAGATCAAGGTATATTACGAACTCGGTCACTCTCTCACCAGTGGAGGGTTACGCAC  
 CGGTGGAACATTACCCCGCCGTGCATTCCGACGCTCTTGTGATCGGTGTCATGCACAAAAGATCA  
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAGCGTTGCCAGCAGGCTGGACTT  
 CGATGCGTCTACAGTGAGCGATGCCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGAATCTCGT  
 CTCTGCTGACCCAGATCCCTGCTTACACATGTCTCGCCTCCAGTGCCCTCACAGAGCTTGCCGC  
 TAGACGTATCCGAGTCGCATTCTCAAATACCTCCCGGCAATTTCTTGATCCACCGGACAGCTAC  
 GACTGGTCGTGGACCTCGATTGGCACTGACGAGGCTTTTGACACTGACTGCTGGGGGCTATCCCA  
 ATGTGATGGAGGCTTCAGCTGTGAGCTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTTCGAGT  
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCGGCCAGTGCGCAA  
 CGAGAGCTTTTCGATGACCTGTGCGCGGTGTGCGAGGAACTGGAAGAGATCCTTCTGGCCGTGAC  
 GGTAGAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATCTTTTTCAATGCGTCAACGAC  
 GGCTTCTTACTGTCTGCGCCAGCAAGCGCAGGCCGACTGCCATCAAGGCACACTAGACGAATGT  
 TTACGGACCAAGAACCTCTTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTTGACCGC  
 CATATCGGAGTTGCTCCTGTGCGAAATTAGGCGGACCCAGAACAGCCATATGAGCCCACTGGAAG  
 GGAGTCGATCCAGTCGCCGAGCAGAGACGACATCAGCAGCAGCAGCGGCCACAGCAGTGTGAC  
 ACCATACCCTTCTTTAGCGAGAACCTCCCTATTGGTGAGCTGTTCTCTATGTTGACCCCTGAC  
 ACACGCCCTATTCTCGGCTTGCACTACGTTACATGTTGGGGTACAATTGCTGCGTGAGAATGAGA  
 TTACTCTGGGAGTACACTCCGCCCAGGGCATTGCAGCTTACATCAGCAAGAGCGGGGAACCAGGC  
 GAGGATATAGCCAGGACAGGGGCGACCAATTCGCAAGATGCGAGGAGCAGCCGACCACTCCAGC  
 GGCTCGGGTGTGTTTATGTTCTTGAGTGATGAAGGGGCTTTCCAGGAGGCAAAGTCTGCTGGTT  
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTTTCCCTCGCCCGCAA  
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCCTCCATGA (SEQ ID NO:85)

**lovE-37**

ATGGCTGCAGATCAAGGTATATTACGAACTCGGTCACTCTCTCGCCAGTGGAGGGTTACGCAC  
 CGGTGGAACATTACCCCGCCGTGCATTCCGACGCTCTTGTGATCGGTGTCATGCACAAAAGATCA  
 AATGTATTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAGCGTTGCCAACGGGCTGGACTT  
 CGATGCGTCTACAGTGAGCGATGCCCCAAGCGCAGGCTACGCCAATCCAGGGCAGCGGATCTCGT  
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCTCGCCTCCAGTGCCCTCACAGAGCTTGCCGC  
 TAGACGTATCCGAGTCGCATTCCCTCAAATACCTCCCGGCAATTTCTTGATCCACCGGACAGCTAC  
 GACTGGTCGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGGCTGTCCCA  
 ATGTGATGGAGGCTTCAGCTGTGAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTTCGAGT  
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCGGCCAGTGCGCAA  
 CGAGAGCTTTTCGATGACCTGTGCGCGGTGTGCGAGGAACTGGAAGAGATCCTTCTGGCCGTGAC  
 GGTAGAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTTCAATGCTTCACGAC  
 GGCTTCTTACTGTCTGCGCCAACAAGCTCAGGCCGACTGCCATCAAGGCACACTAGACGAATGT  
 TTACGGACCAAGAACCTCTTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTTGACCGC  
 CATATCGGAGTTGCTCCTGTGCGAAATTAGGCGGACCCAGAACAGCCATATGAGCCCACTGGAAG  
 GGAGTCGATCCAGTCGCGGAGCAGAGACGACACCAGCAGCAGCAGCGGCCACAGCTGTGTGCGAC  
 ACCATACCCTTCTTTAGCGAGAACCTCCCTATTGGTGAGCTGTTCTCCTATGTTGACCCCTGAC  
 ACACGCCCTATTCTCGGCTTGCACTACGTTACATGTTGGGGTACAATTGCTGCGTGAGTATGAGA  
 TTACTCTGGGAATACACTCCGCCAGGGCATTGCAGCTTCCATCAGCATGAGCGGGGAACCAGGC  
 GAGGATATAGCCAGGACAGGGGCGACCAATTCGCAAGATGCGAGGAGCAGCCGACCACTCCAGC  
 GGCTCGGGTTTTGTTTCATGTTCTTGAGTGATGAAGGGGCTTTCCAGGAGGCAAAGTCTGCTGGTT  
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTTTCCCTCGCCCGCAA  
 CACAAACATGGCATGCTCAGAGATCTCAACAATATTCTCCATGA (SEQ ID NO:86)

**lovE-38**

ATGGCTGCAGATCAAGGTATATTACGAACTCGGTCACTCTCTCGCCAGTGGAGGGTTACGCAC  
 CGGTGGAACATTACCCCGCCGTGCATTCCGACGCTCTTGTGATCGGTGTCATGCACGAAAGATCA  
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAGCGTTGCCAGCAAGCTGGACTT  
 CGATGCGTCTATAGTGAGCGATGCCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT  
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCTCGCCTCCAGTGCCCTCACAGAGCTTGCCGC  
 TAGACGTATCCGAGTCGCATTCCCTCAAATACCTCCCGGCAATTTCTTGATCCACCGGACAGCTAC  
 GACTGGTCGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGGCTGTCCCA  
 ATGTGATGGAGGCTTCAGCTGTGAGCTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTTCGAGT  
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCGGCCAGTGCGCAA  
 CGAGAGCTTTTCGATGACCTGTGCGCGGTGTGCGAGGAACTGGAAGAGATCCTTCTGGCCGTGAC  
 GGTAGAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTTCAATGCGTCCAGC  
 GGCTTCTTACTGTCTGCGCCAACAAGCGCAGGCCGACTGCCATCAAGGCACACTAGACGAATGT  
 TTACGGACCAAGAACCTCTTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTTGACCGC  
 CATATCGGAGTTGCTCCTGTGCGAAATTAGGCGGATCCAGAACAGCCATATGAGCCCACTGGAAG  
 GGAGTCGATCCAGTCGCTGAGCAGAGACGACACCAGCAGCAGTAGCGGCCACAGCAGTGTGAC  
 ACCATACCCTTCTTTAGCGAGAACCTCCCTATTGATGAGCTGTTCTCCTATGTTGACCCCTGAC  
 ACACGCCCTATTCTCGGCTTGCACTACGTTACATGTTGGGGTACAATTGCTGCGTGAGAATGAGA  
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCAGCTTCCATCAGCATGAGCGGGGAAGTAGGC  
 GAGGATATAGTCAGGACAGGGGCGACCAATTCGCAAGATGCGAGGAGCAGCCGACCACTCCAGC  
 GGCTCGGGTTTTGTTTCATGTTCTTGAGTGATGAAGGGGCTTTCCAGGAGGCAAAGTCTGCTGGTT  
 CCCGAAGTGAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTTTCCCTCGCCCGCAA  
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCTCCATGA (SEQ ID NO:87)